

NOURISHING THE BRAIN: IMPACT OF THE MALAYSIAN-MIND DIET ON COGNITIVE RESILIENCE

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ABSTRACT

Mild Cognitive Impairment (MCI) is a pre-dementia state among older adults. The Mediterranean-DASH Intervention for Neurodegenerative Delay (MIND) diet has proven to reduce the risk of MCI in elderly population. However, the current MIND diet is not tailored to the food availability and dietary habits of older Malaysians, influenced by distinct cultural and regional factors. Therefore, this study aimed to develop and validate the Malaysian adaptation of the MIND diet (MY-MINDD) scores and investigate their association with MCI in older Malaysian adults. The study utilized pooled data from 810 participants enrolled in the longitudinal Long-Term Research Grant Scheme-Towards Useful Aging (LRGS-TUA) study using stratified sampling. MY-MINDD scores were derived by integrating established MIND diet food groups and their corresponding scoring mechanism with considerations for common Malaysian foods known for their cognitive benefits or detriments which comprises seven food groups that promote brain health and four groups associated with negative cognitive effects. Participants, averaging 67.9 ± 4.7 years where 30.2% had MCI while 69.8% did not, achieved an average MY-MINDD score of 6.4 ± 0.1 out of 11 points. Those diagnosed with MCI scored lower (6.0 ± 1.7) compared to those without MCI (6.6 ± 1.6 , $p < 0.001$). Multivariate binary logistic regression analysis revealed that participants in the highest MY-MINDD score tertile had significantly reduced odds of MCI (OR = 0.43, 95% CI: 0.26-0.72, $p < 0.001$) after adjusting for relevant covariates. This study underscores the potential of MY-MINDD scores in mitigating MCI odds among Malaysian older adults. Future research should include neuroimaging and metabolomics to further validate these findings. This research was funded by *Geran Universiti Penyelidikan UKM* (GUP-2024-019).

Keywords: Malaysian-MIND Diet, Dietary Pattern, Mild Cognitive Impairment, Older Adult, Validation.

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